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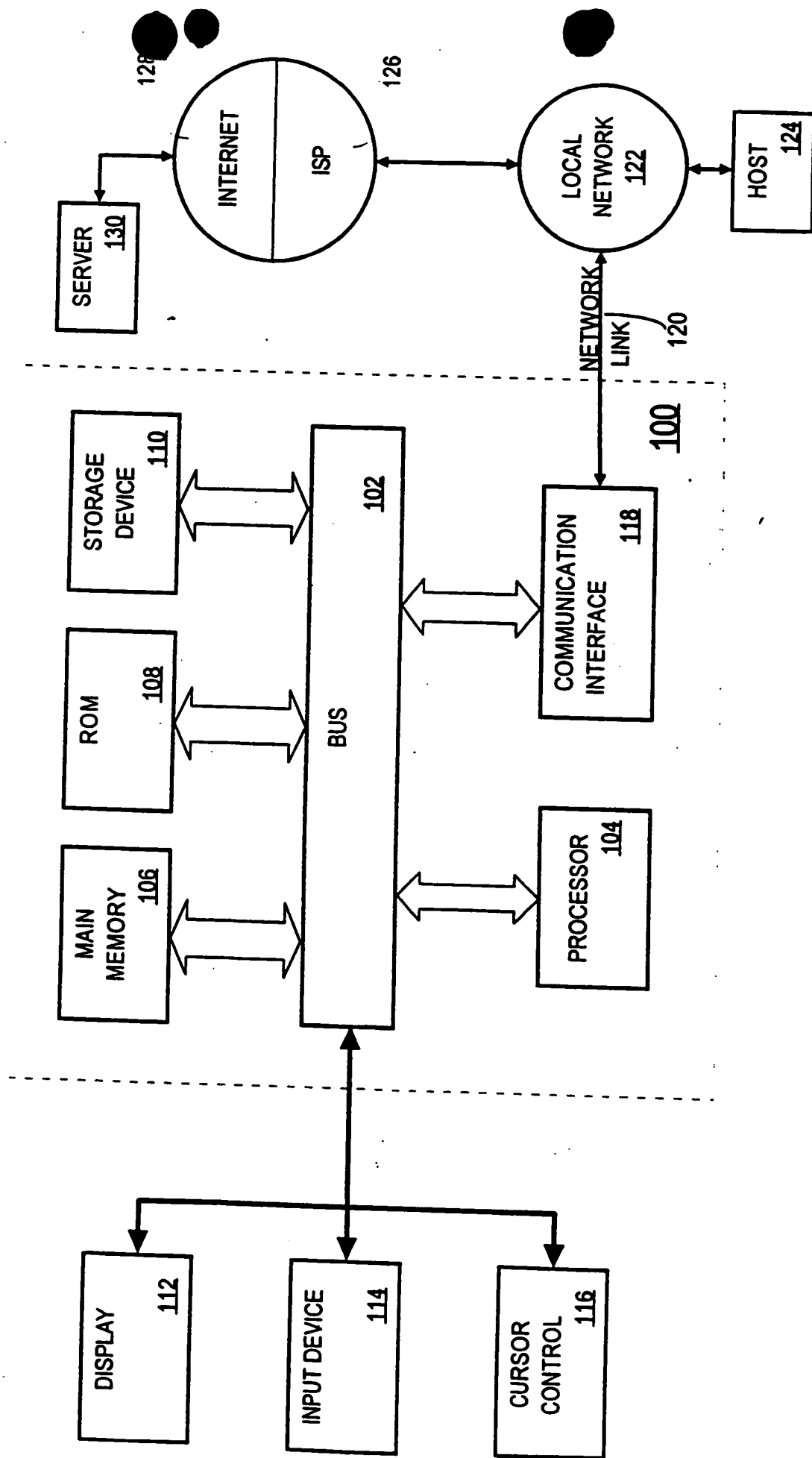


FIG. 1

09872413 060404

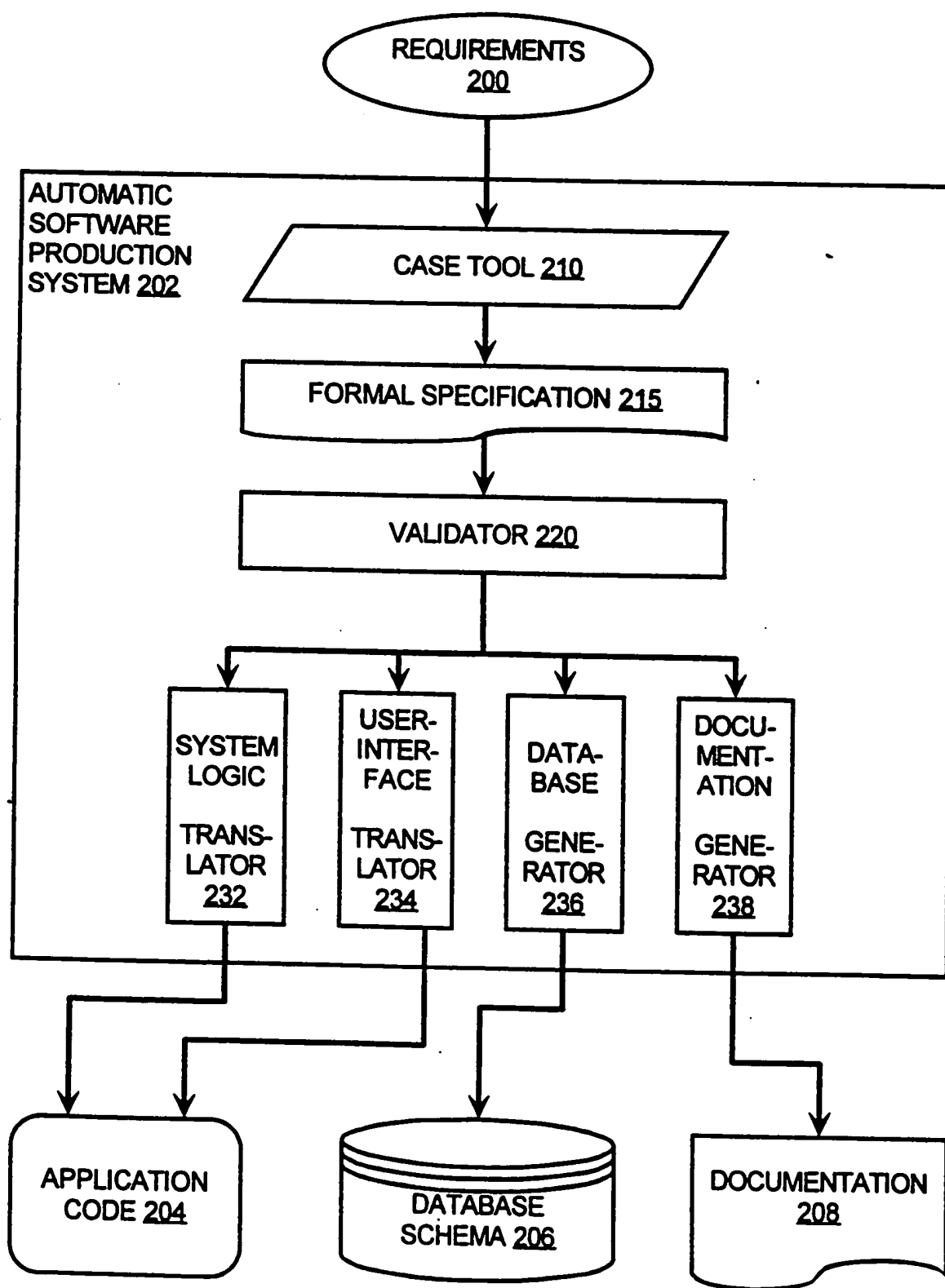


FIG. 2

300

310

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READ. PUNISH/FORGIVE

FIG. 3

The screenshot shows the SOSY Modeler interface with a state transition diagram for a library system. The diagram includes the following states and transitions:

- State 402:** The initial state, represented by a circle with a smaller circle inside.
- State 404 (book0):** A central state representing the book's current state.
- State 412:** A state where the book is available.
- State 414:** A state where the book is lent.
- State 406:** A final state, represented by a circle with a filled center.

The transitions between states are as follows:

- 402 to 404:** Labeled with the event `[!]:new_book` and handwritten number 410.
- 404 to 412:** Labeled with the event `[!]:loan_book F state="available"` and handwritten number 412.
- 404 to 414:** Labeled with the event `[!]:return_book F state="lent"` and handwritten number 414.
- 404 to 406:** Labeled with the event `[!]:destroy_book` and handwritten number 416.

The interface also shows a menu bar (Archivo, Edición, Proyecto, Vista, Herramientas), a toolbar, and a status bar at the bottom that says "Press F1 for Help".

FIG. 4A

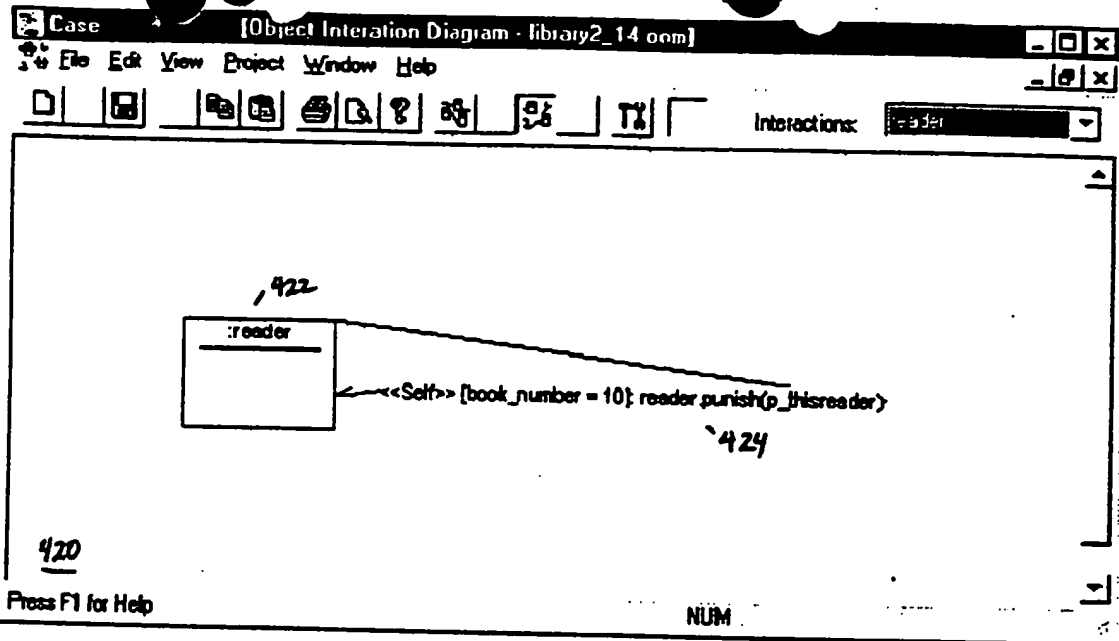


FIG. 4B

Functional Model

Class: reader Attribute: book_number

Event: loan_book Effect: Condition: 1

Event: return_book Effect: Condition: 1

Category: ☒ Function ☐ State-independent ☐ Discrete-domain

Valuation Details:

Event: loan_book Action type: Increment

Valuation condition:

Effect of the event:

1

FIG. 5

09072413 060101

FLOWCHART OF THE FUNCTIONS THAT ALL SPECIES OF SYSTEM LOGIC TRANSLATORS WILL PERFORM

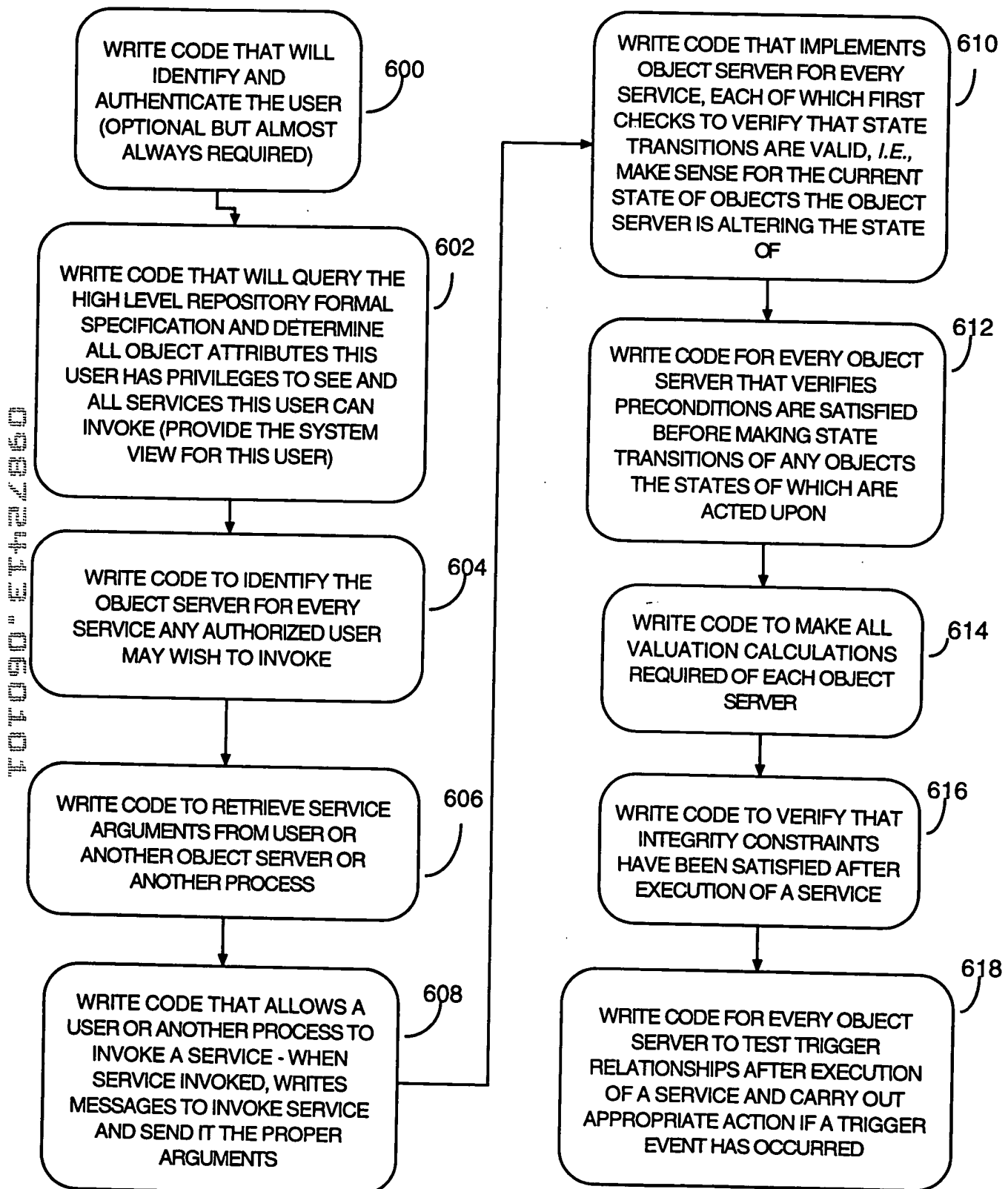
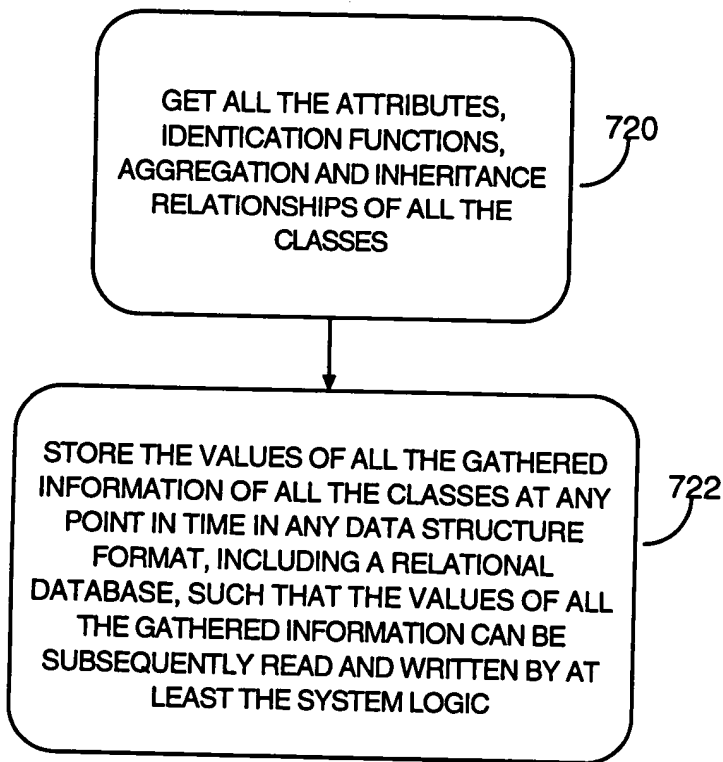


FIG. 6

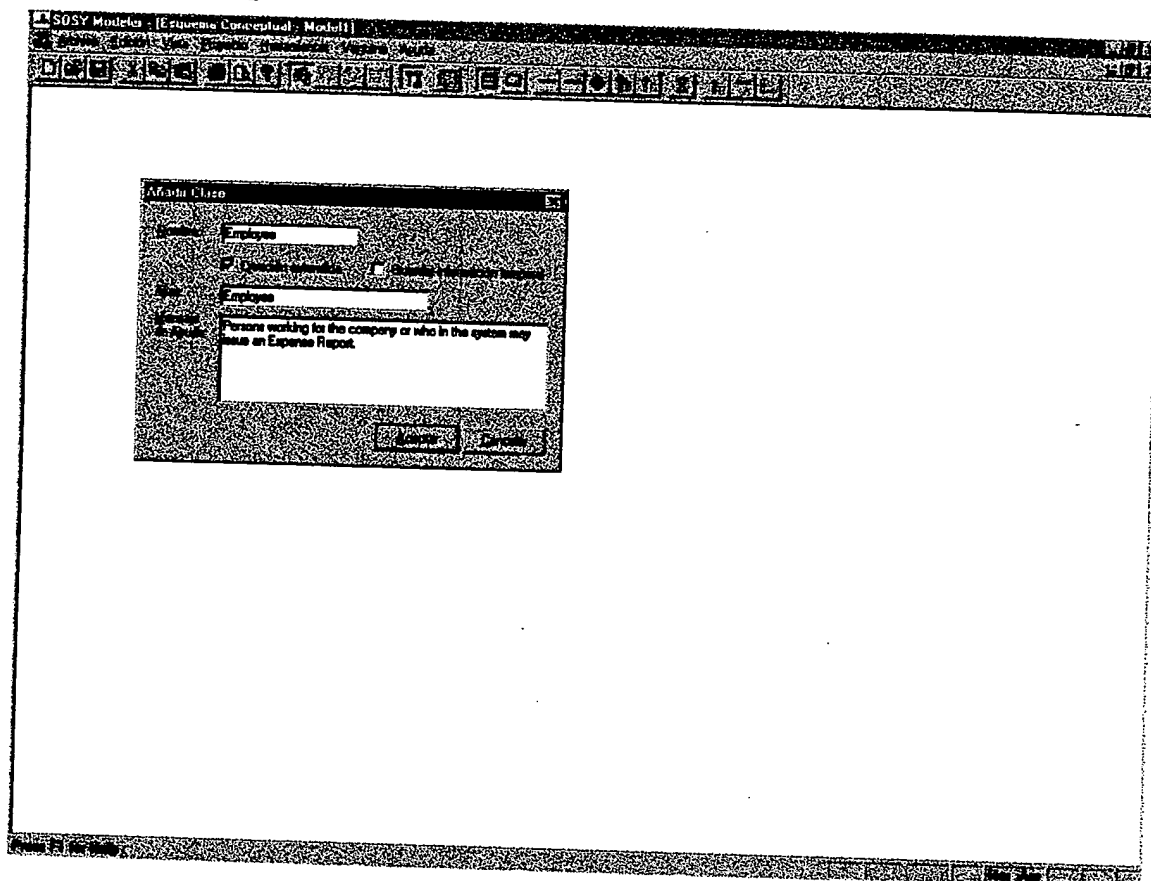
FLOWCHART OF THE FUNCTIONS THAT ALL SPECIES IN THE DATABASE GENERATOR
TRANSLATOR SUBGENUS WILL PERFORM



09072413.060104

FIG. 8

09872413.060101

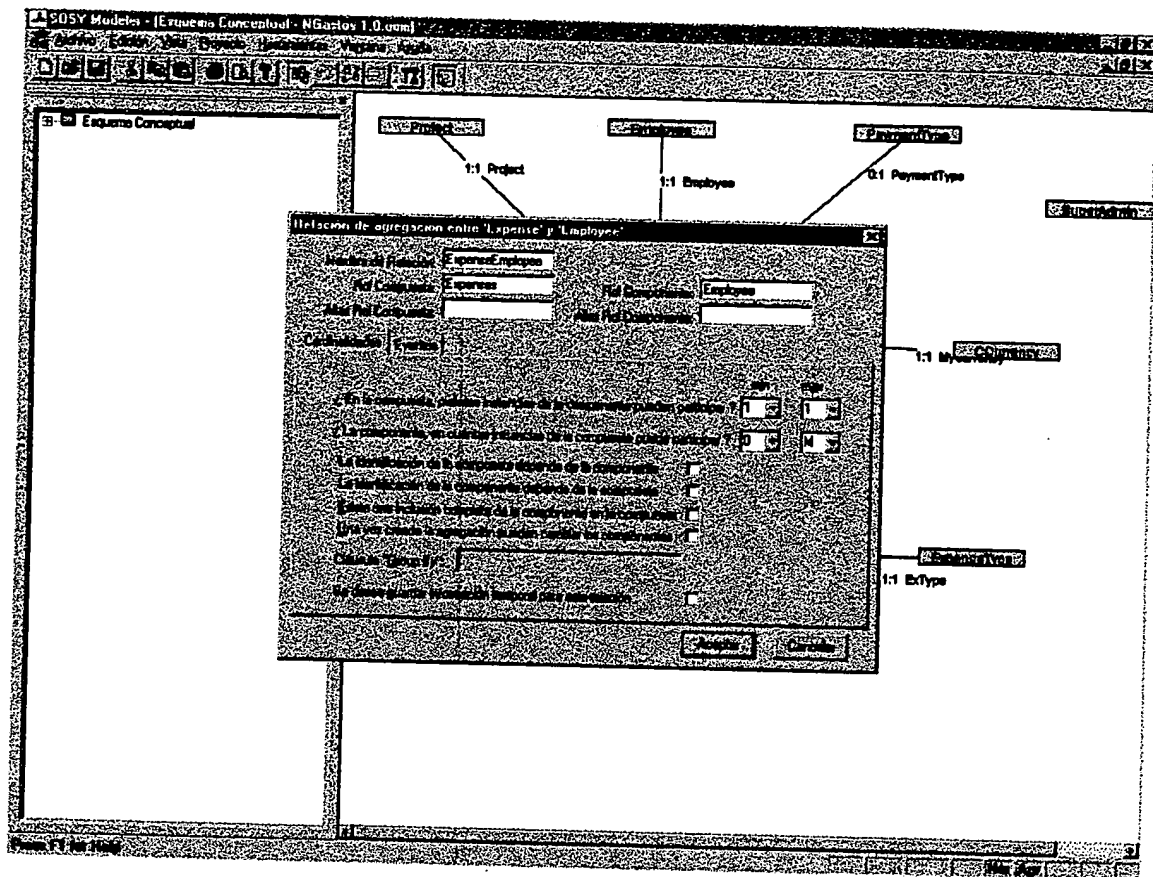


class creation dialog

FIG. 9A

[illegible]

FIG. 9B

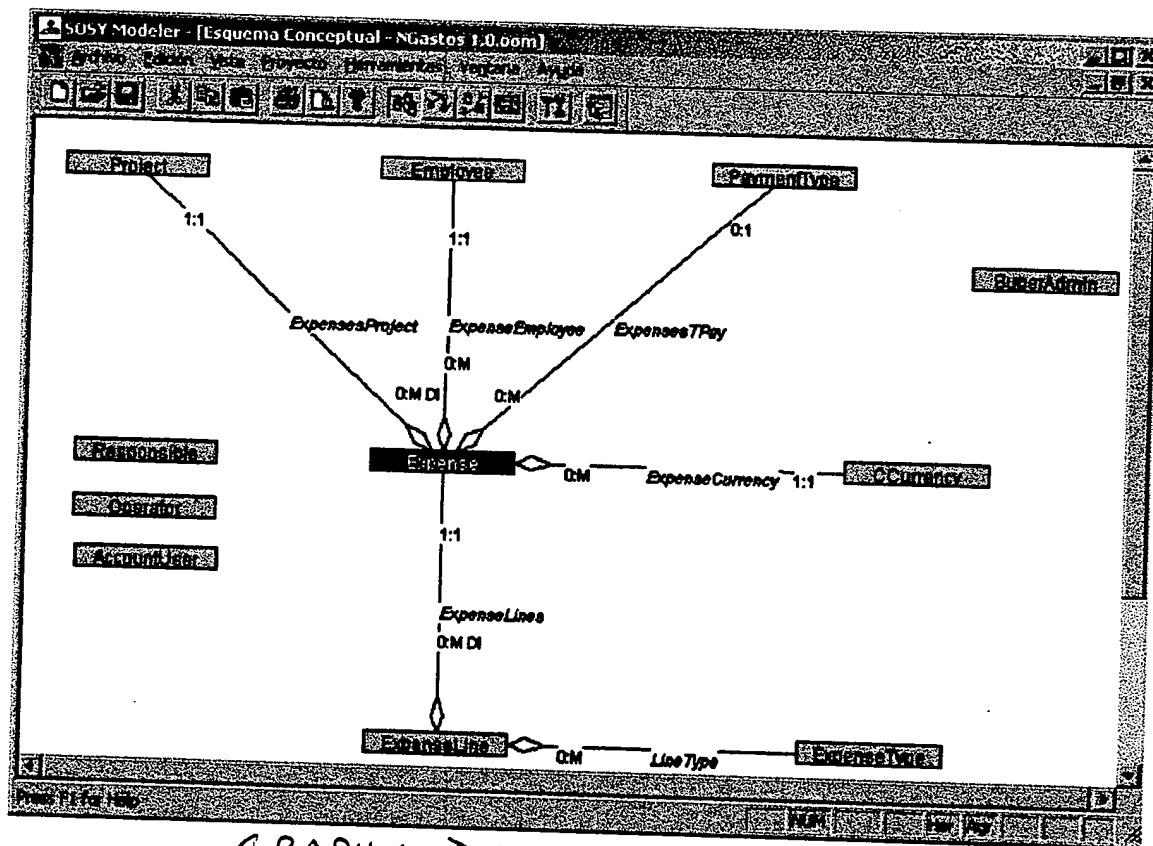


dialog to create and modify relationships between classes

FIG. 90

09872413.060101

figure shows relationships found with all their properties indicated.



GRAPHIC DIALOG TO CREATE
RELATIONSHIPS BETWEEN CLASSES
AND GRAPHICALLY SHOW THE
RELATIONSHIPS SO CREATED

FIG. 10

09872443-060404

09872413.060101

Clase

Atributos

Nombre	Tipo atributo	Tipo dato	Id	Valor def.	Permitido	Nulo
PresentDate	Constante	Date		today()	SI	No
Status	Variable	Int		0	No	No
Cause	Variable	String	255		SI	No
AuthoDate	Variable	Date		NULL	No	SI
AuthoComments	Variable	String	255	NULL	No	SI
PaymentDate	Variable	Date		NULL	No	SI
PayComments	Variable	String	255		No	SI
TotExpenses	Derivado	Real				
TotExpensesCur	Derivado	Real				
Advances	Variable	Real		0	SI	No
AdvancesCur	Derivado	Real				
Exchange	Variable	Real			No	SI
Balance	Derivado	Real				
BalanceCur	Derivado	Real				

Nombre: Tipo Atributo: Tipo Dato:

☐ Información Temporal

Observaciones:

Clase:

(A)

Clase

Atributos

Balance

Formulas de Derivacion

Condición	Fórmula
	TotExpenses - Advances

Condición:
 Fórmula:

Observaciones:

Clase:

(B)

FIG. 11

[illegible]

 American Society of Human Genetics

Next figure shows the formula for the "DELETEALL" transaction:

Use

Attributes Services Derivaciones Restrictions Agendas Transacciones Relaciones Generalidades

Transaction: DELETEALL

Formula:

FOR ALL Lines DO Lines.deleteLine(Lines). deleteExpense(THIS)

Agency: Expense

Agency: [blank] Expense: [blank] Define

Relationship: R_ThisExpense

Relationship: [blank] Create Parameters as Transactions

Observations: [blank]

Class: Expense

Apply Cancel

DIALOG TO DEFINE FORMULA FOR "DELETEALL"
TRANSACTION
FIG. 13

09872443.060101

[illegible]

INTEGRITY CONSTRAINTS OF EXPENSE CLASS
FIG. 14

The value of the attribute "Cause" will be loaded with the value of the argument "p_Cause" of the event "modify" when "modify" was executed.

Modelo Funcional

Clase: Expense Atributo: Cause

Aceptar Cancelar

Evento	Efecto	Condición
modify	= p_Cause	

Añadir Modificar Borrar

☐ Cardinal
 ☒ De Estado
 ☐ De Situación

Detalles de Evaluación

Evento: modify

☐ Inter. para el resto de atributos

Condición de evaluación: 724

IF: []

Efecto del evento: 726

p_Cause

DIALOG BOX TO CREATE EVALUATION OF
 "CAUSE" ATTRIBUTE WITH: THE
 "MODIFY" EVENT TO FORM PART OF
 FUNCTIONAL MODEL

FIG. 15

09872443-060101

09872413.060101

Clase

Relaciones | Servicios | Demoliciones | Reducciones | Agentes | Transacciones | Relaciones | Generalidades

Clase disponible:

Servicio

Servicio
newexpense
modify
close
authorize
rejectautho
DELETEALL

Relaciones

Relaciones
Cause
AuthoComments

Clase AccountUser reports on:

Servicio	Temporizado
Expense.approve	No
Expense.rejectpayment	No
Expense.TPAY	No

Hacer temporal | No hacer temporal

Clase AccountUser tiene atributos sobre:

Atributos
Expense.id_Expense
Expense.PresentDate
Expense.Status
Expense.PaymentDate
Expense.PayComments
Expense.AuthoDate
Expense.TotalExpenses
Expense.TotalExpensesCur
Expense.Advances

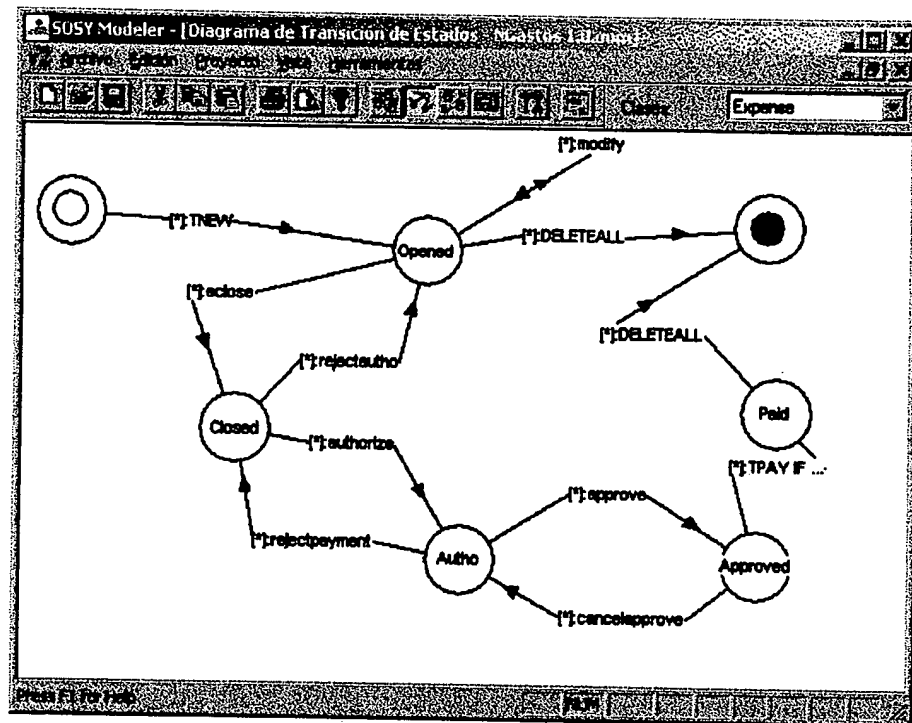
Clase:

Accept | Cancel

AGENT RELATIONSHIP DIALOG THAT CAN BE
USED TO SET WHICH SERVICES "ACCOUNTUSER"
CAN ACCESS AND VISIBILITY OF CLASS
ATTRIBUTES FOR THIS USER

FIG. 16

09372443-060104
TOT030E74850



STATE TRANSITION DIAGRAM FOR CLASS "EXPENSE"

FIG. 17

According to last paragraph of Procedure, if the Advances are greater than total expenses, the system must force the confirmation of the account user. It is expressed as a precondition in the "TPAY" transaction. Next figure shows it.

The image shows a software window titled "Transición" (Transition). It contains several fields and buttons:

- Origen:** A dropdown menu with "Approved" selected.
- Destino:** A dropdown menu with "Paid" selected.
- Buttons:** "Aceptar" (Accept) and "Cancelar" (Cancel) are located in the top right corner.
- Detalle:** A section on the left containing a label "Agente" and a text area with "AccountUser" and "SuperAdmin".
- Servicio:** A dropdown menu with "TPAY" selected.
- Precondición:** A text area containing the logical expression: `Balance > 0 OR ps_ReturnAdvance = TRUE`.
- Condición de control:** An empty text area below the precondition.
- Mensaje en caso de error:** A text area at the bottom containing the message: "Check the advanced money excess".

DIALOG BOX TO MODEL PRECONDITION

FIG. 18

09872413.050104

09872443-060404

Conjunto de Visualización

Nombre:

Attributos a visualizar:

Attributo	Tipo dato
Project.ProjectName	String
Employee.EmpName	String
Employee.EmpSur...	String
Status	Int
AuthoDate	Date
PaymentDate	Date
TotExpenses	Real
Balance	Real

Operaciones:

Attributos:

Attributo	Tipo dato
Cause	String
AuthoDate	Date
AuthoComments	String
PaymentDate	Date
PayComments	String
TotExpenses	Real
TotExpensesCur	Real
Advances	Real
AdvancesCur	Real
Exchange	Real
Balance	Real
BalanceCur	Real

Clase: Expense

DIALOG BOX USED BY SOSY MODELER
TO ESTABLISH A SET OF ATTRIBUTES
TO BE DISPLAYED FOR THE "EXPENSE" CLASS

FIG. 19

09872413 060404

Filtro

Filtro: Alias:

Fórmula:

Observ:

Variables:

Nombre	Alias	Tipo dato	Tipo estilo	Estilo
vf_Project	Project	Project	Sel. Población	
vf_Employee	Employee	Employee	Sel. Población	
vf_DateIniIssue	Initial Issuing Date	Date		
vf_DateEndIssue	Final Issuing Date	Date		
vf_DateIniApp	Initial Approving D...	Date		

Tip: ☒ Simple ☐ Observado

Nombre: Estado de estado:

Alias: Estado de selección:

Tipo de dato:

Class: Expense

DIALOG BOX USED BY SOSY MODELER TO ESTABLISH THE SEARCHING CRITERIA FOR THE EXPENSE CLASS AND TO ESTABLISH THE FILTER FORMULA ^{TO USE} AND THE VARIABLES TO REQUEST THE USER TO ENTER

FIG. 20

FLOWCHART OF THE FUNCTIONS THAT ALL SPECIES IN THE DOCUMENTATION
GENERATOR TRANSLATOR SUBGENUS WILL PERFORM

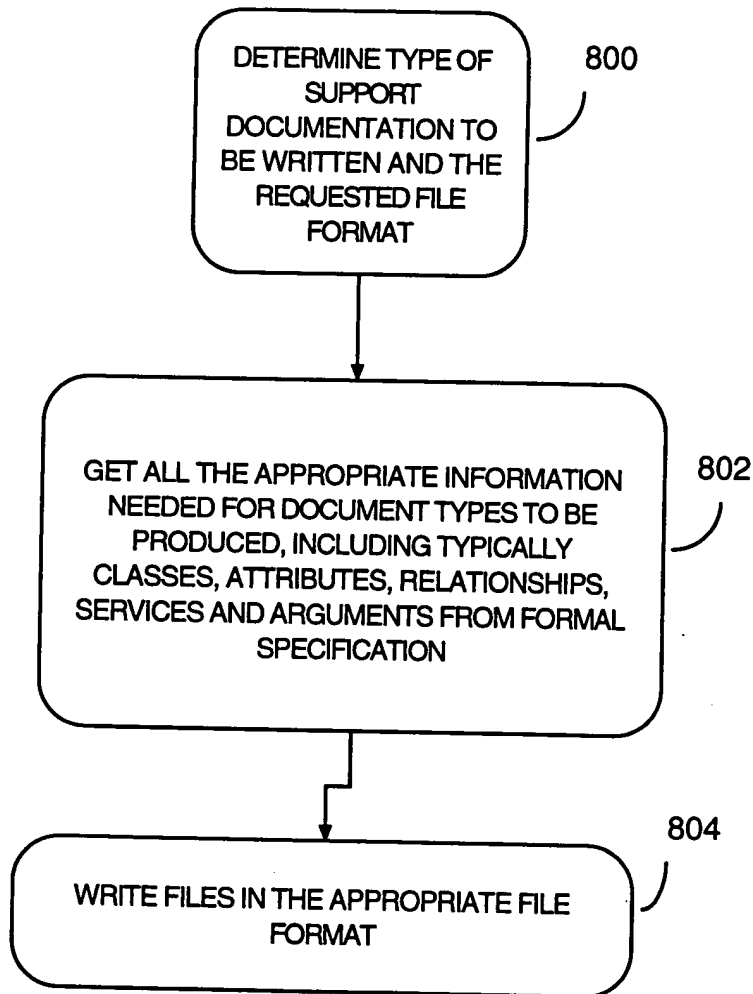


FIG. 21